WHAT IS CLAIMED IS:

1. A probe carrier comprising a probe immobilized area where a nucleic acid probe is immobilized on a carrier, wherein

the carrier has a phosphorus-containing area that contains phosphorus in a predetermined concentration, and the phosphorus contained in the phosphorus-containing area is used as a standard for quantitative analysis of the nucleic acid probe by detecting the phosphorus of the nucleic acid probe.

2. A probe carrier according to claim 1, wherein a plurality of probe immobilized areas are each arranged independently on the carrier in a matrix form.

3. A probe carrier according to claim 1, wherein the phosphorus-containing area is formed by implanting the phosphorus into at least a portion of the carrier.

4. A probe carrier according to claim 1, wherein the phosphorus-containing area is formed as a film formed on at least a portion of a surface of the carrier.

5. A probe carrier according to claim 4,

wherein a concentration of the phosphorus in the film is fixed in a depth direction.

6. A probe carrier according to claim 1, wherein the phosphorus-containing area is formed by incorporating the phosphorus in an entire portion forming the surface having the probe immobilized area of the carrier.

7. A probe carrier according to claim 6, wherein the carrier constitutes the surface having the probe immobilized areas and the entire carrier is comprised of a substrate which uniformly contains the phosphorus.

8. A probe carrier according to claim 7, wherein the carrier is composed of a glass substrate.

9. A probe carrier according to claim 6, wherein a content (weight ratio) of the phosphorus in the phosphorus-containing area is 0.1 ppm or more and 10 % or less.

10. A probe carrier according to claim 5, wherein the film is made from phosphorus silicate glass (PSG) or boron phosphorus silicate glass (BPSG).

11. A probe carrier according to any one of claims 1 to 10, wherein the nucleic acid probe has a nucleic acid that is at least one selected from the group consisting of DNA, RNA, peptide nucleic acid (PNA), complementary DNA (cDNA) and complementary RNA (cRNA).

12. A probe carrier according to claim 1, wherein quantitative analysis of the phosphorus is carried out by detecting a phosphorus secondary ion by time-of-flight secondary ion mass spectrometry (TOF-SIMS).

13. A method for analyzing a probe carrier having a probe immobilized area in which a nucleic acid probe is immobilized and a phosphorus-containing area that contains phosphorus in a predetermined concentration on a carrier, comprising:

detecting an amount of the phosphorus contained in the nucleic acid probe in the probe immobilized area as a first signal intensity;

detecting an amount of the phosphorus in the phosphorus-containing area as a second signal intensity; and

determining the nucleic acid probe in the probe immobilized area by standardizing the first signal intensity by using the predetermined concentration of

the phosphorus in the phosphorus-containing area and the second signal intensity.

14. A method for analyzing a probe carrier according to claim 13, wherein the plurality of probes immobilized areas is each arranged independently on the carrier in a matrix form.

15. A method for analyzing a probe carrier according to claim 13, wherein the phosphorus-containing area is formed by implanting the phosphorus into at least a portion of the carrier.

16. A method for analyzing a probe carrier according to claim 15, wherein the phosphorus-containing area is formed as a film formed on at least a portion of a surface of the carrier.

17. A method for analyzing a probe carrier according to claim 16, wherein a concentration of the phosphorus in the film is fixed in a depth direction.

18. A method for analyzing a probe carrier according to claim 13, wherein the phosphorus-containing area is formed by containing the phosphorus in an entire portion forming the surface having the probe immobilized area of the carrier.

19. A method for analyzing a probe carrier according to claim 18, wherein the carrier constitutes the surface having the probe immobilized areas and the entire carrier is composed of a substrate which uniformly contains the phosphorus.

20. A method for analyzing a probe carrier according to claim 19, wherein the carrier is composed of a glass substrate.

21. A method for analyzing a probe carrier according to claim 18, wherein a content (weight ratio) of the phosphorus in the phosphorus-containing area is 0.1 ppm or more and 10 % or less.

22. A method for analyzing a probe carrier according to claim 16, wherein the film is made from phosphorus silicate glass (PSG) or boron phosphorus silicate glass (BPSG).

23. A method for analyzing a probe carrier according to claim 13, wherein the nucleic acid probe has a nucleic acid that is at least one selected from the group consisting of DNA, RNA, peptide nucleic acid (PNA), complementary DNA (cDNA), and complementary RNA (cRNA).

24. A method for analyzing a probe carrier according to claim 17, wherein the phosphorus concentration of another film which is formed under the same condition as the film which contains the phosphorus and has the fixed phosphorus concentration in the depth direction is analyzed by at least one analysis method selected from the group consisting of:

1) secondary ion mass spectrometry: SIMS;

2) time-of-flight secondary ion mass spectrometry (TOF-SIMS);

3) X-ray photoelectron spectroscopy: XPS;

4) Auger electron spectroscopy: AES;

5) inductively coupled plasma atomic emission spectroscopy: ICP-AES;

6) inductively coupled plasma mass spectrometry: ICP-MS; and

7) Fourier transforms infrared spectroscopy: FT-IR, and determined based on an analytical result thereof.

25. A method for analyzing a probe carrier according to claim 13, wherein the first signal intensity and the second signal intensity each comprise a secondary ion intensity detected by time-of-flight secondary ion mass spectrometry (TOF-SIMS).

26. A method for analyzing a probe carrier

according to claim 25, wherein the secondary ion is one selected from the group consisting of P^-, PO^-, PO_2^- and PO_3^-.

27. A method for analyzing a probe carrier according to claim 16, wherein the signal intensity detected from the film is a signal intensity obtained after the area is etched by sputtering in a fixed amount.

28. A method for analyzing a probe carrier according to claim 13, wherein an image of an arrangement of the nucleic acid probe immobilized areas can be quantitatively displayed.